



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,914	02/25/2004	Akira Nakano	9281-4793	2084
757 7590 06/20/2007 BRINKS HOFER GILSON & LIONE P.O. BOX 10395 CHICAGO, IL 60610				
			EXAMINER ALEJANDRO MULERO, LUZ L	
			ART UNIT 1763	PAPER NUMBER
			MAIL DATE 06/20/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/786,914

Applicant(s)

NAKANO ET AL.

Examiner

Luz L. Alejandro

Art Unit

1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>1006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Reissue Applications

A) Declaration

The supplemental reissue oath/declaration filed on 1/27/06 is defective (see 37 CFR 1.175 and MPEP § 1414) because of the following: the signatures of all the inventors are missing.

Claims 1-23 are rejected as being based upon a defective reissue declaration under 35 U.S.C. 251 as set forth above. See 37 CFR 1.175.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 6-10, 13-14, 17-19, and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawakami et al., JP 06-333879.

Kawakami et al. shows the invention as claimed including a plasma treatment equipment comprising: a plasma chamber having a bottom wall and a side wall; a susceptor electrode (8,12) disposed within the plasma chamber, the susceptor electrode comprising a generally planar shaped electrode portion 8 oriented substantially parallel to the bottom wall of the plasma chamber, the susceptor electrode

further comprising a generally planar shaped shield 12 disposed adjacent to the electrode portion, the shield being located between the electrode portion and the bottom wall of the plasma chamber, wherein the bottom wall of the plasma chamber and the shield of the susceptor electrode have the same DC potential, and wherein the bottom wall of the plasma chamber and the shield of the susceptor electrode are AC shorted to each other by a conductive element 14 at a plurality of short points of the chamber wall which are disposed approximately symmetrically with respect to a center of the shield of the susceptor electrode (see, for example, fig. 6 and its description).

Claims 1, 6-10, 13-14, 17-19, and 23 are rejected under 35 U.S.C. 102(a) as being anticipated by Sakai et al., JP 10-032171.

Sakai et al. shows the invention as claimed including a plasma treatment equipment comprising: a plasma chamber having a bottom wall and a side wall; a susceptor electrode (1-including 1a and 1b, 11) disposed within the plasma chamber, the susceptor electrode comprising a generally planar shaped electrode portion 8 oriented substantially parallel to the bottom wall of the plasma chamber, the susceptor electrode further comprising a generally planar shaped shield 1a, 1b disposed adjacent to the electrode portion, the shield being located between the electrode portion and the bottom wall of the plasma chamber, wherein the bottom wall of the plasma chamber and the shield of the susceptor electrode have the same DC potential, and wherein the bottom wall of the plasma chamber and the shield of the susceptor electrode are AC shorted to each other by a conductive element 12 at a plurality of short points of the

chamber wall which are disposed approximately symmetrically with respect to a center of the shield of the susceptor electrode (see, for example, figs. 6-10 and their descriptions).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 2-5, 11-12, 15-16, and 20-22 are rejected under 35 U.S.C. 103(a) as being obvious over Kawakami et al., JP 06-333879.

Kawakami et al. does not expressly disclose that the susceptor electrode and the chamber wall are shorted at a location shorter than 500 mm from a side wall of the

Art Unit: 1763

chamber wall, the shorting is performed by a metal plate, and an angle formed between the metal plate and the bottom wall is less than 45 degrees.

Regarding the particular shape of the shorting element, a prima facie case of obviousness exists because the particular shape of the shorting element is a matter of choice which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration of the claimed container was significant. Concerning the shorting location and the angle between the metal plate and the bottom wall, a prima facie case of obviousness still exists because where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device absent the showing of unexpected results.

Claims 2-5, 11-12, 15-16, and 20-22 are rejected under 35 U.S.C. 103(a) as being obvious over Sakai et al., JP 10-032171.

Kawakami et al. does not expressly disclose that the susceptor electrode and the chamber wall are shorted at a location shorter than 500 mm from a side wall of the chamber wall, the shorting is performed by a metal plate, and an angle formed between the metal plate and the bottom wall is less than 45 degrees.

Regarding the particular shape of the shorting element, a prima facie case of obviousness exists because the particular shape of the shorting element is a matter of choice which a person of ordinary skill in the art would have found obvious absent

persuasive evidence that the particular configuration of the claimed container was significant. Concerning the shorting location and the angle between the metal plate and the bottom wall, a prima facie case of obviousness still exists because where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device absent the showing of unexpected results.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-23 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 4 and 9 of U.S. Patent No. 6,270,618.

Although the conflicting claims are not identical, they are not patentably distinct from

each other because base on a one one-way obviousness-type double patenting rejection test, all the limitations of claims 1, 6-10, 12-14, and 22-23 of the instant application are encompassed by claims 4 and 9 of the patent (see MPEP 804).

With respect to claims 2-5, 11, 15-21, Nakano et al. does not expressly disclose that the susceptor electrode and the chamber wall are shorted at a location shorter than 500 mm from a side wall of the chamber wall and that an angle formed between the metal plate and the bottom wall is less than 45 degrees. However, a prima facie case of obviousness still exists because where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device absent the showing of unexpected results.

Response to Arguments

The objection to the drawings in the office action mailed 08/25/06 have been withdrawn since it is believed that fig. 5 adequately discloses the claimed shorting. With respect to the double patenting rejection, the examiner respectfully submits that a prima facie case of obviousness-type double patenting has been made and has not been effectively argued by the applicant. Furthermore, with respect to the rejection of the claims due to the defective supplemental reissue oath/declaration, note that the rejection is respectfully maintained because the new supplemental reissue oath/declaration incorporates language that is required such as, the acknowledgement

Art Unit: 1763

of the filing of the foreign priority, and therefore a signed supplemental reissue oath/declaration needs to be submitted. Additionally, applicant's arguments with respect to claims 1-23 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on 10/2/06 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609.04(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

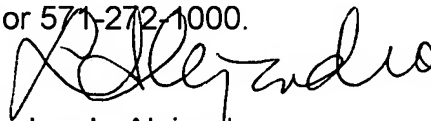
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luz L. Alejandro whose telephone number is 571-272-

Art Unit: 1763

1430. The examiner can normally be reached on Monday to Thursday from 7:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571-272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Luz L. Alejandro
Primary Examiner
Art Unit 1763

January 22, 2007